

- [034] According to FIG. 1, a steering and driving system 1 designed according to the invention, as the main component, an industrial truck (of vehicle) initially has a driving engine (traction motor) 2, ~~[[on]]~~ by which a driving shaft (traction motor shaft) 3 is driven on a driving transmission (traction gear) 21 of a rotor 23. The rotor 23 is rotatable, together with the driving transmission 21, along ~~[[at]]~~ a vertical axis V. For the execution of this swivel movement, the steering and driving system 1 allotted on an electric steering engine (steering motor) 4, on which a steering transmission (steering gear) 5 is arranged. For gear reduction of the steer motor revolution, the output of this steering transmission gear 5 affects a rotary assembly 27 that is linked slip free with a housing 51 of driving transmission 21. Particularly, it is of importance for the steering and driving system 1 designed according to the invention that the driving engine 2, the steering engine 4 and the steering transmission 5 are arranged co-axial with each other. ✓
- [035] In detail, this steering and driving system 1 is designed in such a manner that the driving engine shaft 3 is ~~designed as~~ a solid shaft and is fed through a hollow shaft placed by a steering engine shaft (steering motor shaft) 9. A first spur-wheel 19 is fixed on the driving engine shaft 3 on the far end its traction motor, which meshes with a second spur-wheel 20 that is on a gearbox input shaft of the driving transmission (traction gear) 21~~[[.]]~~ (not shown here). In this traction gear, the drive torque is managed in the known manner on an angle drive to a gear output shaft that is linked slip free with a wheel hub 22. The rotor 23 is fixed on this wheel hub 22 with screws. ✓
- [043] Eventually the planetary carrier 18 of the third planet wheel set stands effectively engaged with the inner teeth of a bearing inner ring 25 of a rotary assembly 24, which is linked slip free on a fixation screw 44 with the rotary assembly 27. An outer ring 50 as well as a rolling element 29, enclosed between the rings 25, 50 belong to the rotary assembly 24. ✓

- [045] The outer ring 50 of the rotary assembly 24 is firmly combinable with the chassis C of the industrial truck whereby in this outer ring 50, a bore 26 is designed with a screw thread, in which a fixation screw is screwed in, meshing these two parts. ✓
- [046] Finally, FIG. 1 shows that on housing 8 of steering engine 4, an outward radial flange 52, that can be built from one or more plates, is arranged, fastened by a fixation screw 37 led through its axial bore. The thread section of the fixation screw 37 is screwed in a thread in the outer ring 50 of rotary assembly 24, so that the housing 8' of steering engine is ascertained with the hollow wheel 16 serving as housing section and the third planetary carrier 18 as well as the cap 47 axial against the bearing outer ring 50 and thus against the chassis C of the industrial truck. ✓
- [048] Also for both these design forms the steering engine shaft (steering motor shaft) 55 serves as sun wheel and carries an outer gearing which is engaged with the teeth of planet wheels 33 and/or 35. For the second design variations, right near the vertical axis V, the planet wheels 33 are supported slip free on a planetary carrier 34 and are additionally engaged with an inner gearing on an inward radial section of a steering transmission housing 43. Further, the planetary carrier 34 meshes with the inner gearing of inner ring 25 of the rotary assembly 24 already known from FIG. 1, so that the rotary assembly 27 is rotatable at the vertical axis V by the steering engine 4. ✓
- [050] As shown in FIG. 2 to the right of the vertical axis V, it is profitable preferable if the fixation screws 45 penetrate the flange 52 of steering engine housing 8 as well as also a bore in flange 58 on steering transmission housing 43 so that, in this manner, both the upper engine elements 2, 4 are centered to the steering transmission housing 43 and are ascertained against the bearing outer ring 50 of the rotary assembly 24. ✓